

MUREP Small Business Technology Transfer (M-STTR) Planning Grants

Title: Panopticon Technology Development Partnership

Institution: California State Polytechnic University, Pomona

City/State: Pomona, CA

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FY: 2022

SUMMARY:

Through this collaboration, we intend to build on the success of previous partnerships with SBCs and provide opportunities for an MSI and contribute to technology development and the success of the educational aspect of the new technology in STEM education. Cloudstone's technology provides the opportunity for the students to learn critical elements of space awareness, space surveillance, and space safety which are becoming raising concerns for future space missions. These elements are not typically taught in undergraduate-level aerospace programs. However, components of these topics can be integrated into the curriculum to introduce the students to the concerns of the new era in spaceflight and planetary defense. The Cloudstone technology allows engaging students to develop and apply Machine Learning and Artificial Intelligence techniques that can enhance the autonomy and reliability of future systems. Our plan for this planning grant is to investigate the framework of collaboration with Cloudstone that benefits students through teaching elements, hands-on projects, and possible contribution to the further development of Cloudstone algorithms for processing observation data. Ideally, after completing this planning grant, the PI with a selected team of Co-I and collaborators will partner with Cloudstone to submit a proposal to NASA STTR 2023.